

Listing of Claims:

Claims 1-14 (canceled)

Claim 15 (previously presented): A method for coding positions of data elements in a data structure, the method comprising:

associating position codes with the data elements in a pre-determined sequence, wherein the position codes are represented as rational numbers; and

selecting the position codes such that, if lengths of the position codes are unlimited, any desired number of new position codes may be allocated as positions for new data elements that are to be inserted between positions of two data elements in order to code positions of the new data elements within the data structure without changing the associated position codes.

Claim 16 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 15, wherein at least one of a first position code and a last position code of the data elements is selected such that other position codes may be inserted at least one of before the first position code and after the last position code.

Claim 17 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 16, wherein at least one of the first position code is not equal to 0 and the last position code is not equal to 1.

Claim 18 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 15, wherein the position codes include binary data.

Claim 19 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 18, wherein the position codes include at least one data bit n-tuples and at least one extension bit, a quantity of the at least one extension bit corresponding to a quantity of the at least one data bit n-tuples.

Claim 20 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 15, wherein the data structure forms part of a data tree.

Claim 21 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 15, wherein the data elements include data codes for the data elements of a document.

Claim 22 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 21, wherein the document is an XML document.

Claim 23 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 21, wherein the data codes for the document are generated with an MPEG coding method.

Claim 24 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 23, wherein the coding method includes a standardized MPEG-7 coding method.

Claim 25 (previously presented): A method for coding positions of data elements in a data structure, the method comprising:

associating position codes with the data elements in a pre-determined sequence, wherein the position codes are represented as rational numbers; and

selecting the position codes such that new position codes for new data elements may be allocated for inserting the new data elements between positions of two adjacent data elements so as to code positions of the new data elements within the data structure without changing the associated position codes, wherein at least one new position code is longer than a longest of the position codes of the two adjacent data elements.

Claim 26 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 25, wherein at least one of a first position code and a last

position code of the data elements are selected such that other position codes may be inserted at least one of before the first position code and after the last position code.

Claim 27 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 26, wherein at least one of the first position code is not equal to 0 and the last position code is not equal to 1.

Claim 28 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 25, wherein the position codes include binary data.

Claim 29 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 28, wherein the position codes include at least one data bit n-tuple and at least one extension bit, a quantity of the at least one extension bit corresponding to a quantity of the at least one data bit n-tuple.

Claim 30 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 25, wherein the data structure forms part of a data tree.

Claim 31 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 25, wherein the data elements include data codes for the data elements of a document.

Claim 32 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 31, wherein the document is an XML document.

Claim 33 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 31, wherein the data codes for the document are generated with an MPEG coding method.

Claim 34 (previously presented): A method for coding positions of data elements in a data structure as claimed in Claim 33, wherein the coding method includes a standardized MPEG-7 coding method.

Claim 35 (previously presented): A device for coding positions of data elements in a data structure, comprising:

parts for providing that position codes be associated with the data elements in a pre-determined sequence, wherein the position codes are represented as rational numbers;

parts for selecting the position codes such that, if lengths of the position codes are unlimited, any desired number of new position codes may be allocated as positions for new data elements that are to be inserted between positions of two data elements in order to code positions of the new data elements within the data structure without changing the associated position codes.

Claim 36 (previously presented): A data transmission system for both coding and decoding position codes of data elements in a data structure, comprising:

a device for coding positions of the data elements in the data structure, wherein the device associates position codes with the data elements in a pre-determined sequence, wherein the position codes are represented as rational numbers, and selects the position codes such that, if lengths of the position codes are unlimited, any desired number of new position codes may be allocated as positions for new data elements that are to be inserted between positions of two data elements in order to code positions of the new data elements within the data structure without changing the associated position codes; and

a device for decoding the position codes of the data elements in the data structure.